

D1
Cont.

that for a copolymer made from A and B monomers, one end of the spectrum is a polymer comprised of strictly alternating A-B-A-B units (an "alternating copolymer"), while the other end is a polymer having one end A-A-A in a single block with the other end B-B-B in a single block (a "block copolymer"). Random copolymers are comprised of segments of A and segments of B monomer occurring along the polymer chain, the segments containing a random number of repeat units with each occurrence.

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Amend the paragraph at page 14, line 22 through page 15, line 21 to read as follows.

D2

The degree to which a random copolymer has segments resembling a "pure block" or a "pure alternating" copolymer depends upon the conditions under which it was polymerized. The relative reaction rates of monomer self addition versus co-monomer addition (also called reactivity ratio rates) also contribute to the "blocky" or "alternating" character of the random copolymer. For example, the two extremes of relative reaction rates (self addition/co-monomer addition) are zero and infinity. The rate is zero if an A moiety in a polymer chain can only add a B monomer to it. The rate is infinity where an A moiety in a polymer chain adds another A monomer unit at a rate that is infinitely fast compared to A/B addition. In the first case, a pure alternating copolymer will result. In the second case, a pure blocky copolymer of A will form, then add B moieties. Between these two extremes, copolymers containing segments of varying lengths of A and B moieties interspersed will result. This concept can be expressed according to the following relationship:

$$r_1 = k_{aa}/k_{ab} \quad r_2 = k_{bb}/k_{ba}$$